



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Pulmonary Vascular Disease

SESSION TITLE: Pulmonary Vascular Disease Posters

SESSION TYPE: Original Investigation Posters

PRESENTED ON: October 18-21, 2020

CENTRAL AND PERIPHERAL VENOUS THROMBOSIS IN NON-MECHANICALLY VENTILATED SURVIVORS OF COVID-19

PETER NAUKA GALINA GLAZMAN-KUCZAJ LAUREL MOHRMANN ANDREI ASSA ERICK ORAN
SHAWN JINDAL SARAH BARON WILLIAM SOUTHERN AND SWETA CHEKURI

PURPOSE: Novel coronavirus disease 2019 (COVID-19) is associated with significant morbidity and high mortality, however, 70-81% of all cases are classified as non-severe. COVID-19 disease is being increasingly recognized as a prothrombotic state with a high incidence of coagulopathy. Up to 30% of intensive care unit patients with COVID-19 develop a venous thromboembolism (VTE). Limited studies of non-ICU and non-mechanically ventilated patients have suggested a 5 to 10% risk of VTE. However, these studies have been limited in scope and may not be generalizable to patients seen in the United States. The goal of this study is to further characterize non-critically ill COVID-19 patients at our institution who develop VTEs.

METHODS: This is a retrospective cohort study using data from the electronic medical record. It examined all adult inpatients diagnosed with COVID-19 based on a positive nasopharyngeal/oropharyngeal swab who were not mechanically ventilated during hospitalization and who were discharged alive from three hospitals comprising an integrated health system in Bronx, NY between March 11, 2020 and May 2, 2020. Patients were eligible for study inclusion if an upper or lower extremity duplex or Computerized Tomography (CT) imaging with contrast to rule out PE was performed during admission or within 14 days of discharge. Summary statistics were used to characterize patients with and without VTE based on imaging findings. Unpaired two-tailed t-test, Wilcoxon rank sum test or test of proportion were used to compare the groups.

RESULTS: Of the 2671 adult inpatients with COVID-19 who were not mechanically ventilated and survived to discharge, 313 (11.7%) completed CT or duplex imaging to identify VTE, and 72 patients (72/2671, 2.7%) were found to have a confirmed VTE. Out of the 72 VTE identified, 31 were located in peripheral veins, 38 were in pulmonary veins, and 3 were in both peripheral and pulmonary veins. Compared to patients without VTE on imaging, patients with VTE were of similar age (60.3 vs 61.5 years, $p=0.55$) and body mass index (30.8 vs 30.2, $p=0.56$). Patients who developed a VTE had a longer length of stay (10 vs 8 days, $p=0.02$) and a more elevated admission white blood cell count (10.3 vs 8.4 k/uL, $p=0.002$), d-dimer (4.37 vs 1.67 ug/mL, $p<0.001$) and lactic acid dehydrogenase (474 vs 373 mg/dL, $p=0.005$).

CONCLUSIONS: Patients with a non-severe form of COVID-19 who survive to discharge may be prone to developing VTE, though their baseline risk factors for COVID-19 related disease were the same as those without a VTE in our cohort.

CLINICAL IMPLICATIONS: Laboratory findings at the time of admission may help identify those patients with COVID-19 at higher risk of being diagnosed with VTE.

DISCLOSURES: Employee relationship with Sanofi Pasteur Please note: \$1-\$1000 Added 06/19/2020 by Andrei Assa, source=Web Response, value=Salary

My spouse/partner as a Investor relationship with Extend Fertility Please note: \$20001 - \$100000 Added 06/01/2020 by Sarah Baron, source=Web Response, value=Ownership interest

No relevant relationships by Sweta Chekuri, source=Web Response

No relevant relationships by Galina Glazman-Kuczaj, source=Web Response

No relevant relationships by Shawn Jindal, source=Web Response

No relevant relationships by Laurel Mohrmann, source=Web Response

No relevant relationships by Peter Nauka, source=Web Response

No relevant relationships by Erick Oran, source=Web Response

No relevant relationships by William Southern, source=Web Response

DOI: <http://dx.doi.org/10.1016/j.chest.2020.08.1881>

Copyright © 2020 American College of Chest Physicians. Published by Elsevier Inc. All rights reserved.